



TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

TARDEC Robotics

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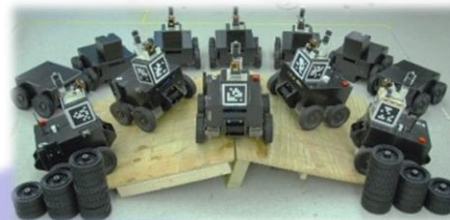
Outreach & University



Shaping Requirements



Automotive OEMs and Suppliers



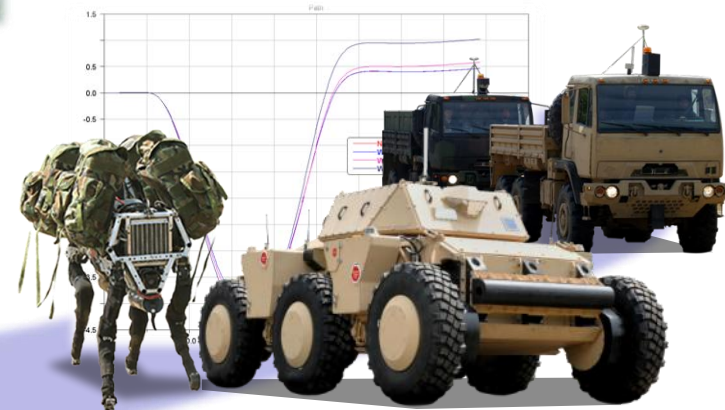
International



Building Modeling & Simulation

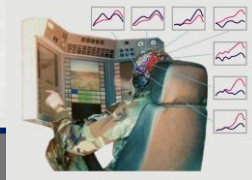


Component Development



System Analysis & Prototypes

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Transition

Requirements

Concepts

Analysis

Component
Development

Component
Testing

System
Integration

Virtual Proving
Ground

Vehicle
Testing/Demo

Supporting the Current Force



Enabling the Future Fight



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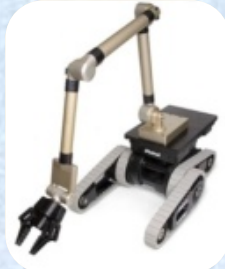
What are the future technologies of each area and why (What are the game changers and why do we have to invest in these game changers)?

- Autonomous Route Clearance, Autonomous Convoy Logistics, Persistent Stare, Robotic Wingman, Manned/Unmanned systems interoperability, Soldier/System Fusion, Advanced Vehicle Control, and Collaborative Manned/Unmanned mission execution.
- Fully Autonomous Leader Follower, Collaborative Terrain Mapping / Following , Adaptive Tactical Formations, Mission Specific Behaviors, Scene Understanding & Cognition , and Human-Machine Interfaces.
- Substantially increase force protection, and even provide force multiplier effects.
- Extensive M & S development for determination of autonomous levels and safety.

Unmanned Ground Systems



Vehicle Inspection



Squad Mission Support



Safe Operations



Autonomous Convoy



Advanced Platform Demonstrator



Robotic Armed Maneuver Platform (Wingman)



Robotic Decontamination

Next Generation Technologies

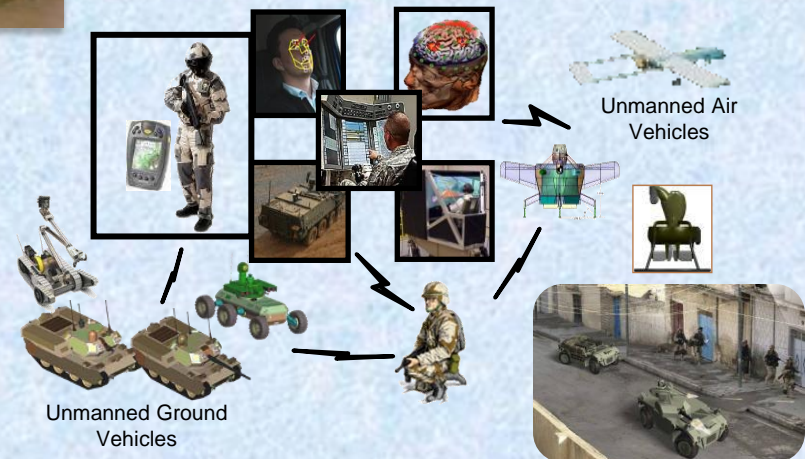
- Fully Autonomous Leader Follower
- Collaborative Terrain Mapping/Following
- Tactical Formations
- Mission Specific Behaviors
- Scene Understanding & Cognition
- Human-Machine Interfaces
- Application of Neuro-ergonomics
- Common Interchangeable Components
- Interoperability for Robotic Systems



Soldier-Machine Interfaces



Advanced Crew Stations, Soldier Monitoring, Common Controller, Battle Planning Aids, etc...



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Soldier Transportable	Vehicle Transportable	Self Transportable	Appliqué
Crew Served Bot 	Mounted or Towed <div>Man Transportable Robot System (MTRS) POR</div>	Soldier Follower IBCT <div>Squad Mission Equipment Transport (SMET) CDD</div>	Remote Operation <div>Husky Mounted Detection System (HMDS) POR</div>
Small Bot <div>Small Unmanned Ground Vehicle (SUGV) CDD</div>		Medium Wingman SBCT <div>Multi-Mission Unmanned Ground Vehicle (MM-UGV) CDD</div>	Supervised Autonomy <div>Convoy Active Safety Technology (CAST) CDD</div>
Micro Bot 	Armed 	Heavy Wingman HBCT 	Full Autonomy <div>Combat Autonomous Mobility System (CAMS) JCTD</div>
Nano Bot 	Humanoid <div>Battlefield Extraction Assist Robot (BEAR) Initiative</div>	Squad Member 	Exoskeleton <div>Exoskeleton (XOS) CDD</div>